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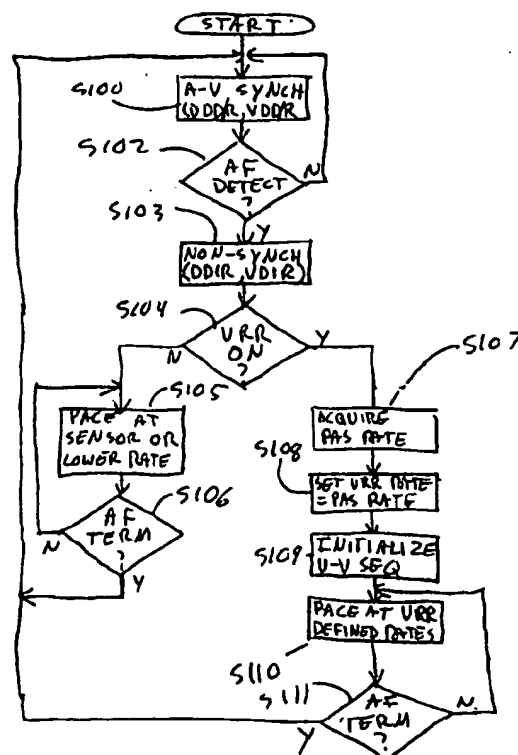
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(54) Title: REGULARIZATION OF VENTRICULAR RATE DURING ATRIAL TACHYARRHYTHMIA

(57) Abstract

A pacing system provided with a mode switching feature and ventricular rate regularization (VRR) function adapted to stabilize or regularize ventricular heart rate during chronic or paroxysmal atrial tachyarrhythmia. In a preferred embodiment, the pacing system nominally operates in an atrial synchronized pacing mode such as DDD or DDDR pacing mode. In response to detection of atrial rhythm characteristics consistent with an atrial tachyarrhythmia, e.g., atrial fibrillation, a mode switch into a non-atrial synchronized, ventricular rate regularization pacing mode, e.g. DDIR or VDIR pacing mode, is made. If the VRR function is programmed on, the ventricular pacing rate based upon a rate responsive sensor derived ventricular pacing rate modulated on a beat by beat basis by preceding intrinsic or paced ventricular events, the stability of the intrinsic ventricular heart rate, and any atrial pace events to regularize the ventricular pacing rate. The pacing system may also be permanently programmed to the DDIR pacing mode with the VRR feature functioning continuously. The pacing system may also be permanently programmed to the VVIR pacing mode with VRR function activated, but without consideration of atrial pace events.



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